

**Notice of Allowability**

Application No.

10/804,277

Applicant(s)

MUSICK ET AL.

Examiner

Timothy C. Vanoy

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on June 30, 2006 and the interview of July 27, 2006.
2. ☒ The allowed claim(s) is/are 1-3 and 5-12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date June 30, 2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date July 24, 2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

*Timothy C Vanoy*  
Timothy C Vanoy  
Primary Examiner  
Art Unit: 1754

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Jessica Sinnott, applicants' attorney, on July 27, 2006.

The application has been amended as follows:

On pg. 13 Ins. 3-18 in the applicants' specification set forth in the applicants' amendment filed on June 30, 2006, delete:

--, and

(b) recovering the titanium dioxide nanopowder having a surface area in the range of about 30 to about 300 m<sup>2</sup>/g and wherein about 50 volume percent of the particles have a diameter of about 80 nm or less and wherein about 90 volume percent of the particles have a diameter of about 100 nm or less--.

### **EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE**

While U. S. Patent 5,201,949 discloses a substantially similar process for making titanium dioxide particles by the oxidation of titanium tetrachloride in what appears to be the same flame reactor (please see col. 7 lines 1-7) at a temperature that is at least 800 °C and a pressure that is at least about 10 psi (please see col. 2 lines 17-21), in the presence of: (i) water vapor in an amount ranging from 50 to 100,000 ppm based on the

Art Unit: 1754

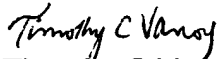
weight of titanium dioxide under production (please see col. 2 lines 22-25); (ii) a spacing gas (i. e. the applicants' diluent gas) in an amount that ranges from 1 to 100 mole percent based on the titanium tetrachloride and oxygen (please see col. 5 lines 31-38), and (iii) a nucleant consisting essentially of a cesium substance in an amount ranging from 8 to 2,000 ppm based on the weight of titanium dioxide under production, the applicants' independent claim limits the surface area of the titanium dioxide particles to range from 30 to 300 m<sup>2</sup>/g whereas Table 1 set forth in col. 7 in U. S. Patent 5,201,949 reports surface areas that range from 6.5 to 6.9 m<sup>2</sup>/g. All of the claim limitations must be taught or suggested by the prior art to establish a *prima facie* case of obviousness of a claimed invention: please see the discussion of the *In re Royka* 490 F.2d 981, 180 USPQ 580 (CCPA 1974) court decision set forth in section 2143.03 in the MPEP 8<sup>th</sup> Ed., Rev. 3, Aug. 2005.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman,, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Timothy C Vahoy  
Primary Examiner  
Art Unit 1754

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